

R E M A R K S

Applicant has carefully considered the Office Action of February 12, 2004 rejecting claims 1, 5-8 and 12-17, based on informalities and indefiniteness under Sec. 112 and Sec. 102(b).

The Applicant wishes to express his appreciation to the Examiner for the early indication of allowable subject matter.

The present response is intended to fully address all points of rejection raised by the Examiner, and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

Claims 1, 5-8, 10, 12, and 14-17 have been currently amended. Claims 11 and 13 have been previously been amended. Claims 2-4 and 9 have previously been deleted. Therefore, claims 1, 5-8 and 10-17 remain in the case.

The amendments are self-explanatory and clarify the definitions as needed, and it is believed that they remove the Sec. 112 and Sec. 102(b) rejections indicated by the Examiner.

The present invention discloses an improved computer system and method for efficiently locking shared resources connected to multiple processors over a PCI bus or over any other communication. The disclosed computer system comprises different Central Processing Units (CPUs), which are communicatively interconnected with a shared memory and shared system resources, accessible to each CPU. The communicative interconnection is across a communication bus providing a single read operation capable of atomically reading a collection of memory elements.

Claims 1, 5-8, 10, 12, and 14-17 have been amended to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner has rejected claims 1, 5, and 7 under Sec. 102(b) as being anticipated by Brady.

The process described by Brady relates to a parallel computing system including multiple nodes and comprising a distributed lock mechanism that controls access to system resources, each node including hardware-based lock processing apparatus configured as hardware logic circuitry and provided to perform hardware-controlled, software independent, functions. Such apparatus comprises a communication interface for receiving and transmitting control and data messages and a table arrangement for storing plural lock words. However, Brady discloses nothing regarding a method for locking shared resources connected to multiple processors over a PCI bus or over any other communication means, in a method which is implemented in software only.

In contrast, the present invention discloses a computer system and method for efficiently locking shared resources implemented in software only. The computer system, as described in page 6, lines 1 to 15, contains multiple processing units connected over a PCI bus or over any other communication means having similar memory cycles characteristics, i.e. where the write operation can be atomically performed in a single memory element while a read command can access at least two or more elements simultaneously.

Furthermore, according to the present invention, the portion of shared memory, which is dedicated to locking mechanism control commands, is divided into ownership rows; one ownership row for each resource. In the case where four processing units are used, each byte of a four-byte double word is used as an owner field for a specific processing unit. This is supported by the specification at page 7, 3rd paragraph, lines 16 to 23.

The novel computer system and method described herein for efficiently locking resources connected to multiple processors

over a PCI bus or over any other communication cannot be considered to be disclosed by Brady. Therefore, independent claims 1, 5, and 7 are not anticipated under Sec. 102(b).

As stated in the decision in *In Re Marshall*, 198 USPQ 344 (1978), "To constitute an anticipation, all material elements recited in a claim must be found in one unit of prior art...". Since Brady neither 1) identically describes the invention, nor 2) enables one skilled in the art to practice it, Applicant deems the 102(b) rejection improper, and respectfully requests that it be withdrawn.

In view of the foregoing remarks, all of the claims in the application are deemed to be allowable. Further reconsideration and allowance of the application is respectfully requested at an early date.

Respectfully submitted,



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